



Form GSOP 1-PIN (04/98)

STATE OF CALIFORNIA  
Department of General Services - Office of Procurement  
**PURCHASE ORDER**

Page 1

Purchase Order No. Rev. Date  
**62153** 6/30/2008

Supplier No.	Solicitation No.	Delivery Date	FOB Point	Invoice Terms
808017	56999	180 Days ARC	Destination	1%/10 DAYS

ALUMA TOWER COMPANY, INC  
1639 OLD DIXIE HWY  
VERO BEACH, FL 32961  
Attn: RON DINIZ

*S* CALIFORNIA HIGHWAY PATROL  
*h* FLEET OPERATIONS SECTION  
*i* 3300 REED AVENUE  
*o* WEST SACRAMENTO, CA 95605  
*P* Attn: RICK BOSSEMEYER

*C* CALIFORNIA HIGHWAY PATROL  
*h* FISCAL MANAGEMENT SECTION  
*a* P.O. BOX 942901  
*t* SACRAMENTO, CA 94298-2901  
*r*  
*o*  
*g*  
*e*

Agency Billing	Agency Purchase Estimate	Purchase Estimate	Revision
08076	074E7044	67147	2

Phone: 772-567-3423

Agency Contact  
DAVID BAYONETA

Phone  
916-375-2990

Date Received

Item No.	Quantity	Unit	Commodity Code	Description	Unit Price	Extension
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PURCHASE ORDER CHANGE #1  
MARCH 10, 2009

Purchase Order Change (POC) #1, for Antenna Trailer Equipment has been modified to reflect the following changes.

- 1. Delivery Date Change**  
The 180 days After Receipt of Order (ARO) date of March 14, 2009 has been extended to April 1, 2009.
- 2. Change in Specification & substitution of drawings**  
Substitute the attached drawings for Specification 3.2.2 page 8 of 11, Specification 3.2.3 page 9 of 11, and Specification 3.2.4 page 10 of 11.
- 3. Delete specification requirement no. 3.3.2 (page 3 of 11).**
- 4. Model Change**  
Specification requirement 3.5.27 (page 6 of 11) from 4-1000W/240VAC to four (4) FRC Optimum Quartz halogen lampheads, 50 4-500 watt bulbs for a total output of 2000 watts. Height of the light per the bid specification would change from 6ft to 7 1/2 ft.  
Model: NS 1.8 3000-4 OPT 240 VAC
- 5. Other specifications clarification and/or modifications on attached revision recap document is being provided for reference and have been incorporated into the purchase order award.**

ALL OTHER REQUIREMENTS, TERMS AND CONDITIONS REMAIN THE SAME.

Sales and/or use tax to be extra unless noted above

Buyer

SHANNON KELLER

Phone

916-375-4606

BOC Number

(010)

STATE OF CALIFORNIA  
Bid Specification  
Portable Antenna Tower Trailer  
California Highway Patrol (CHP)

2320-0059

Annex A  
LOW BAND ANTENNA MOUNTING ARRANGEMENT

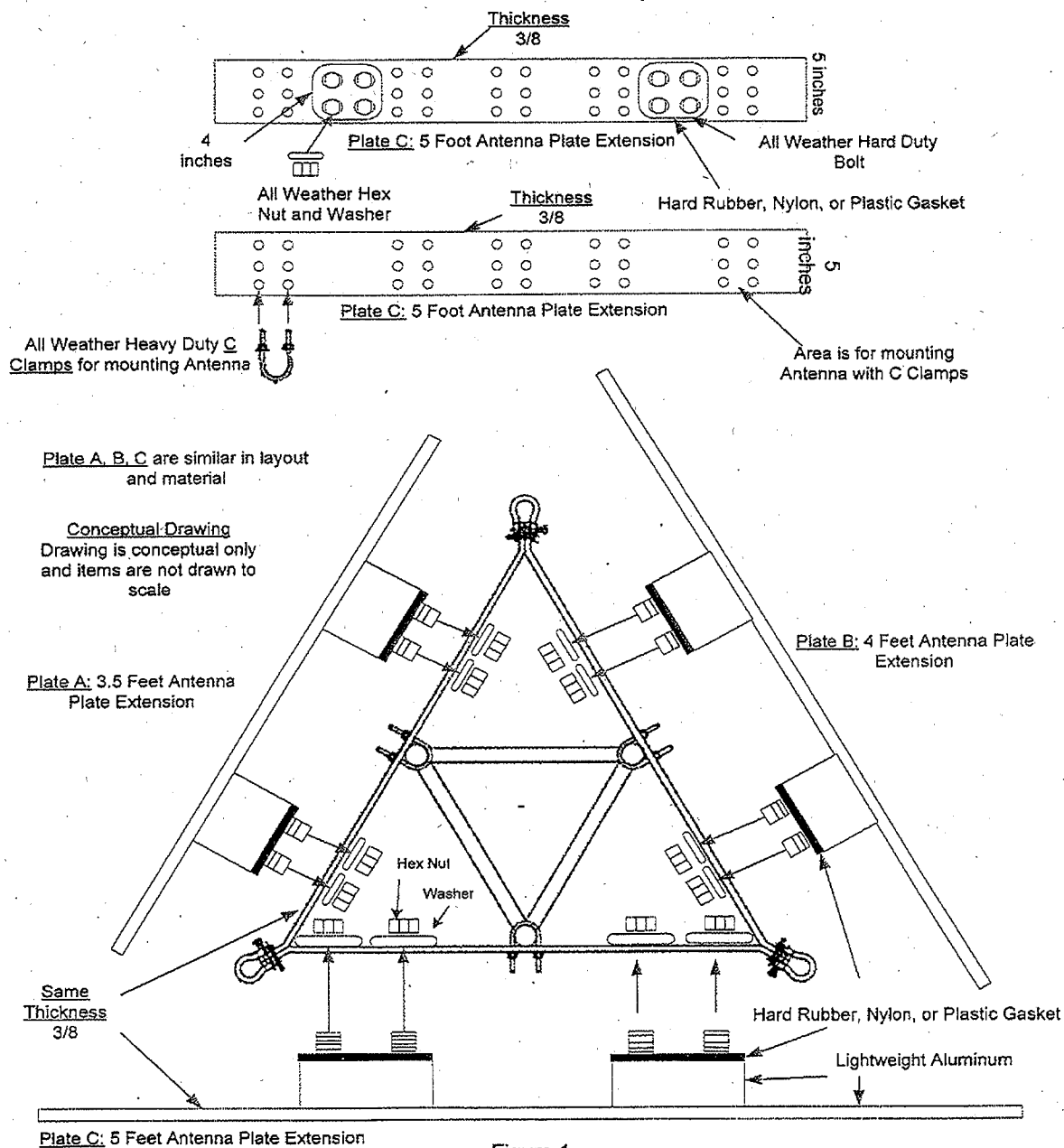


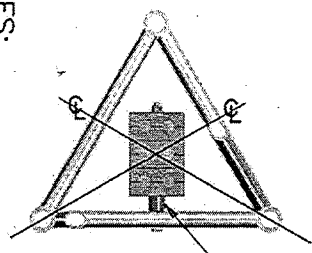
Figure 1

(New)

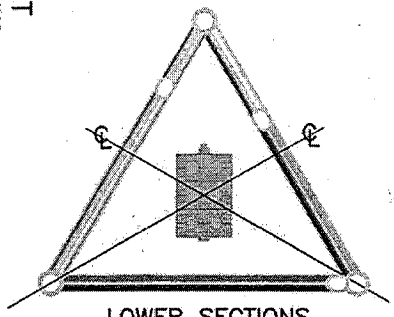
**GENERAL NOTES:**

SEE SR-20.0-0881 FOR RIGGING LAYOUT  
THIS DRAWING IS THE PROPERTY OF ALUMA TOWER CO. INC.  
ANY DUPLICATION OTHER THAN ITS EXPRESSED PURPOSE,  
REUSE, MODIFICATION OR PLAGIARISM OF ANY PART OF THIS  
DOCUMENT IS PROHIBITED. VIOLATORS WILL BE PROSECUTED  
UNDER FLORIDA STATE STATUTES.  
DO NOT SCALE DRAWING.

CABLE HANGER  
BLOCK ASSEMBLY



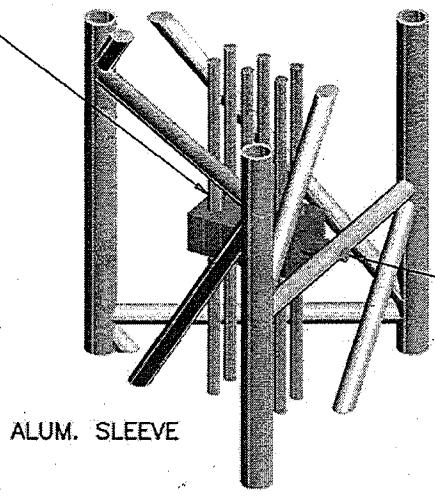
TOP SECTION  
BOLTED



LOWER SECTIONS  
FREE FLOATING

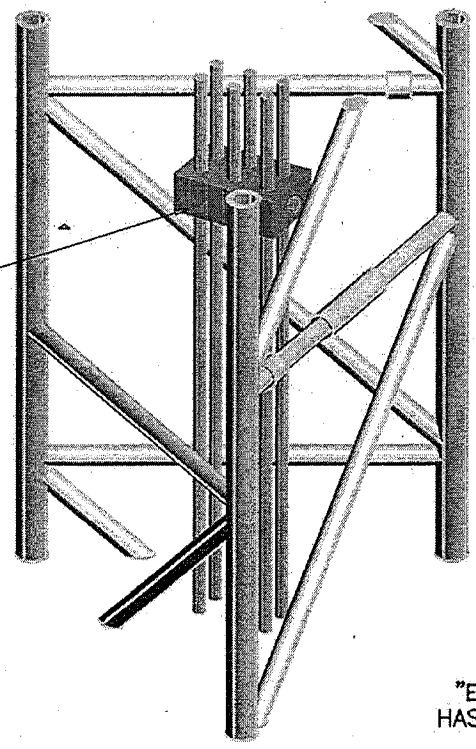
TOP VIEW OF TOWER  
SECTIONS SHOWING  
CENTER PLACEMENT OF  
CABLE HANGERS

CABLE HANGER  
BLOCK ASSEMBLY



ALUM. SLEEVE

VIEW OF "C" SECTION  
SHOWING CABLE HANGER  
BOLTED TO RUNG  
EVERY 5 FEET



VIEW OF BOTTOM 2 SECTIONS  
SHOWING CABLE HANGER  
FREE FLOATING  
EVERY 5 FEET

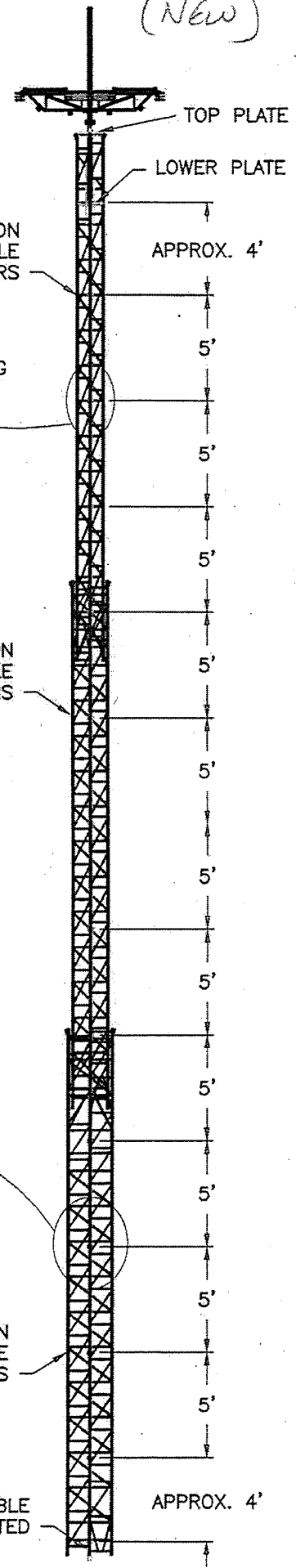
"C" SECTION  
HAS 4 CABLE  
HANGERS

BOLTED  
TO RUNG

"D" SECTION  
HAS 4 CABLE  
HANGERS

"E" SECTION  
HAS 5 CABLE  
HANGERS

BOTTOM CABLE  
HANGER BOLTED



REV.	DATE	DESCRIPTION	BY
B			
A	2-6-09	ADDED TOP VIEW SHOWING HANGERS CENTERED	H.C.

**ALUMA TOWER CO. INC.**  
VERO BEACH, FL 32960

**SPECIAL CABLE HANGER  
ASSEMBLY DETAILS**

DRWN BY: H.C.	SCALE: FULL	DRWG. NO. AT-1885
DSN BY: C.D.	DATE: 2-5-09	REV. A
CHK BY:	APP'D	

(010)

STATE OF CALIFORNIA  
Bid Specification  
Portable Antenna Tower Trailer  
California Highway Patrol (CHP)

2320-0059

Annex B  
CABLE ADAPTER PLATE

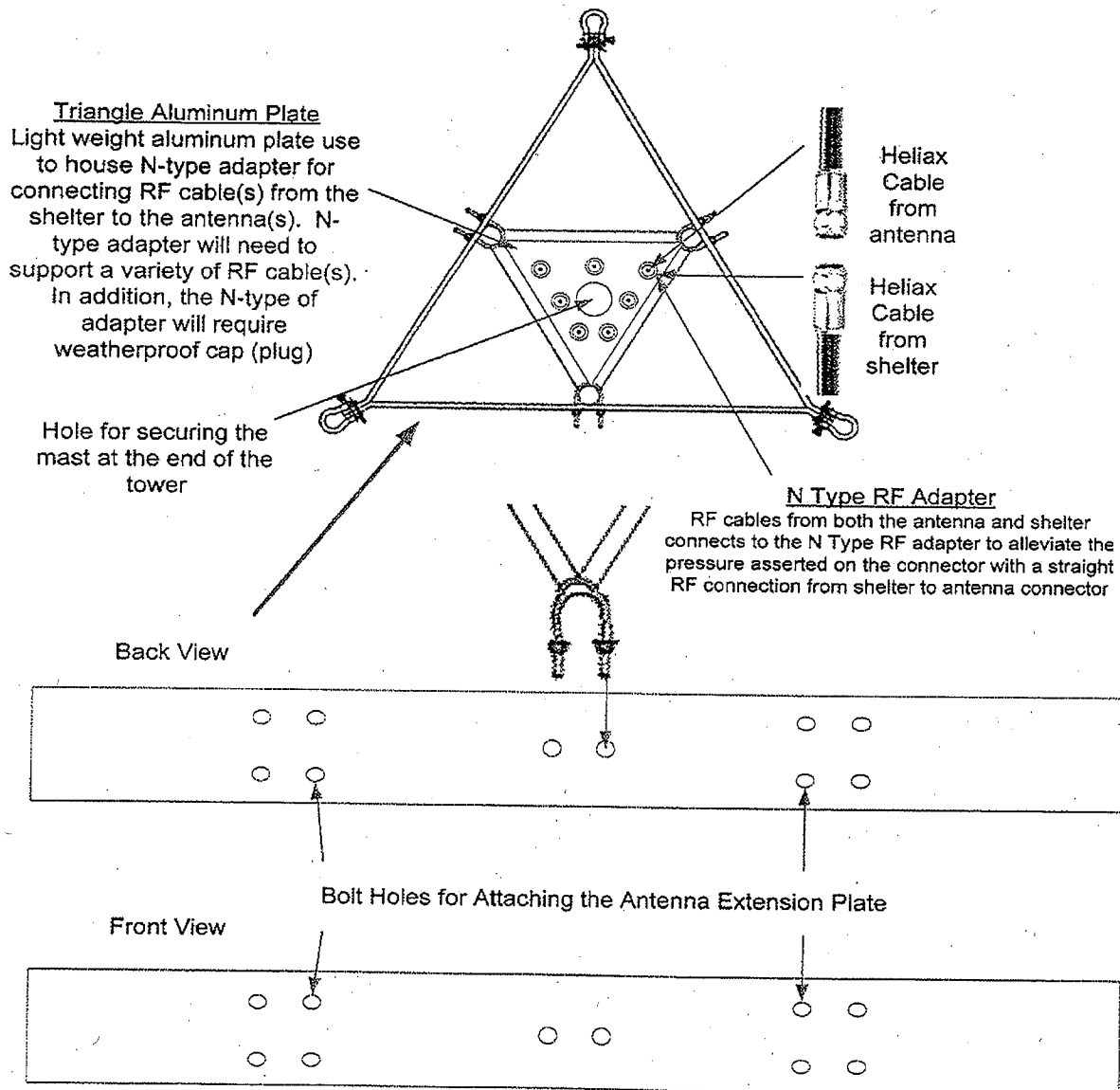
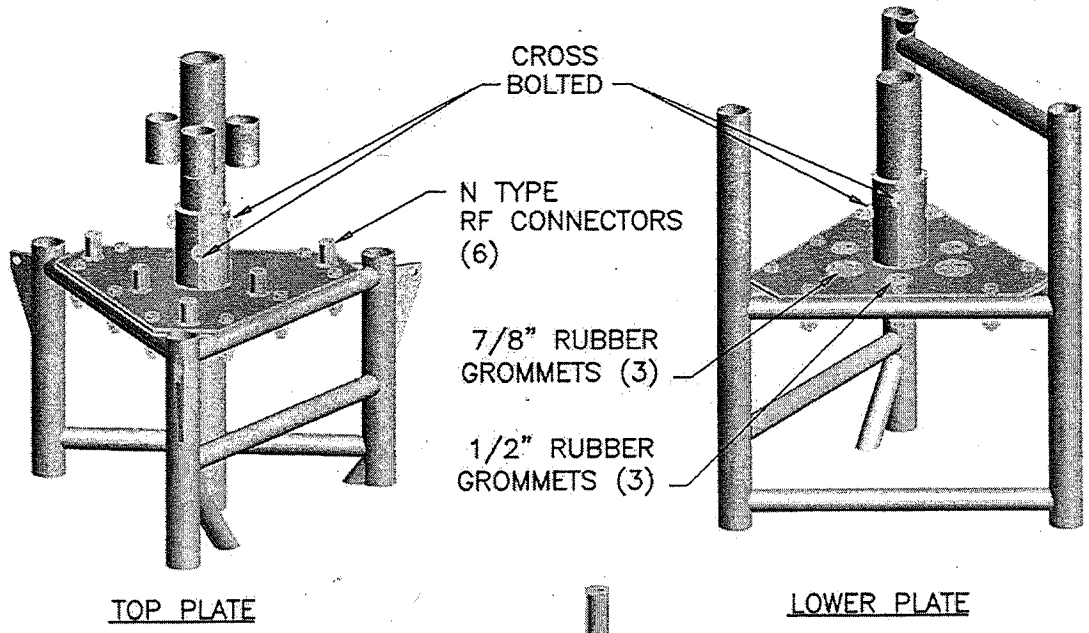


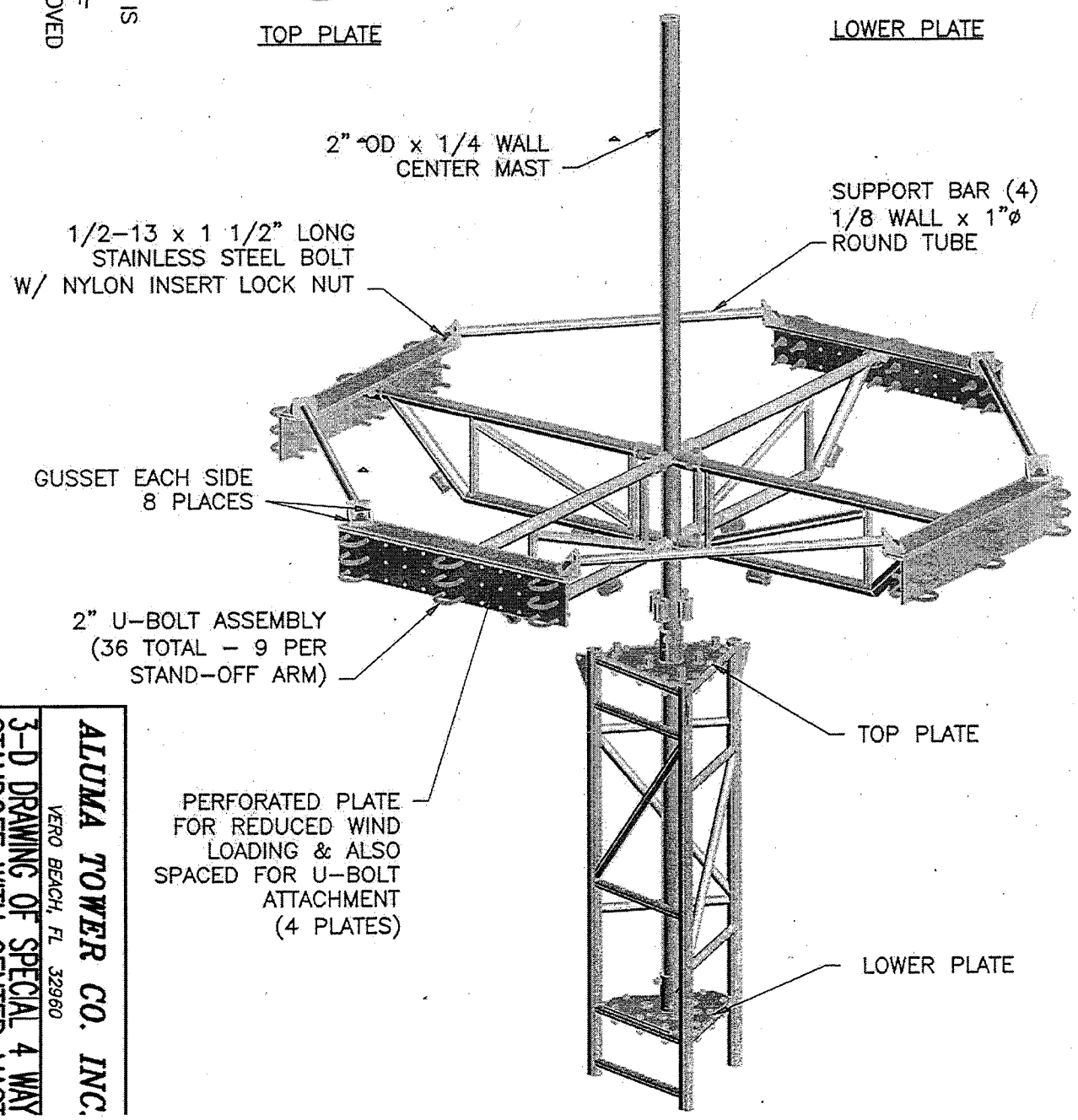
Figure 2

(New)



TOP PLATE

LOWER PLATE



TOP PLATE

LOWER PLATE

1/2-13 x 1 1/2" LONG  
STAINLESS STEEL BOLT  
W/ NYLON INSERT LOCK NUT

GUSSET EACH SIDE  
8 PLACES

2" U-BOLT ASSEMBLY  
(36 TOTAL - 9 PER  
STAND-OFF ARM)

PERFORATED PLATE  
FOR REDUCED WIND  
LOADING & ALSO  
SPACED FOR U-BOLT  
ATTACHMENT  
(4 PLATES)

**GENERAL NOTES:**  
ANTENNAS SHOULD BE PLACED SO WEIGHT IS  
DISTRIBUTED AS EVENLY AS POSSIBLE.  
INOPERABLE ANTENNAS SHOULD BE USED IF  
NECESSARY. THIS ASSEMBLY MUST BE REMOVED  
BEFORE TRAVELLING.  
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REV.	DATE	DESCRIPTION	BY
B	2-6-09	ADDED HOLES TO U-BOLT BRKT., GUSSETS TO EACH SUPPORT BAR ANGLE, (3) 7/8 GROMMETS	H.C.
A	2-3-09	ADDED TOP & LOWER PLATE DETAIL VIEWS	H.C.

**ALUMA TOWER CO. INC.**  
VERO BEACH, FL 32960

**3-D DRAWING OF SPECIAL 4 WAY  
STANDOFF WITH CENTER MAST**

VERO BEACH, FL 32960

SCALE: FULL

DATE: 1-26-09

AP'D

DRWG. NO. QS-1835-2

REV. B

(010)

2320-0059

Annex C

Cabling Protection Against Wind and Chafing

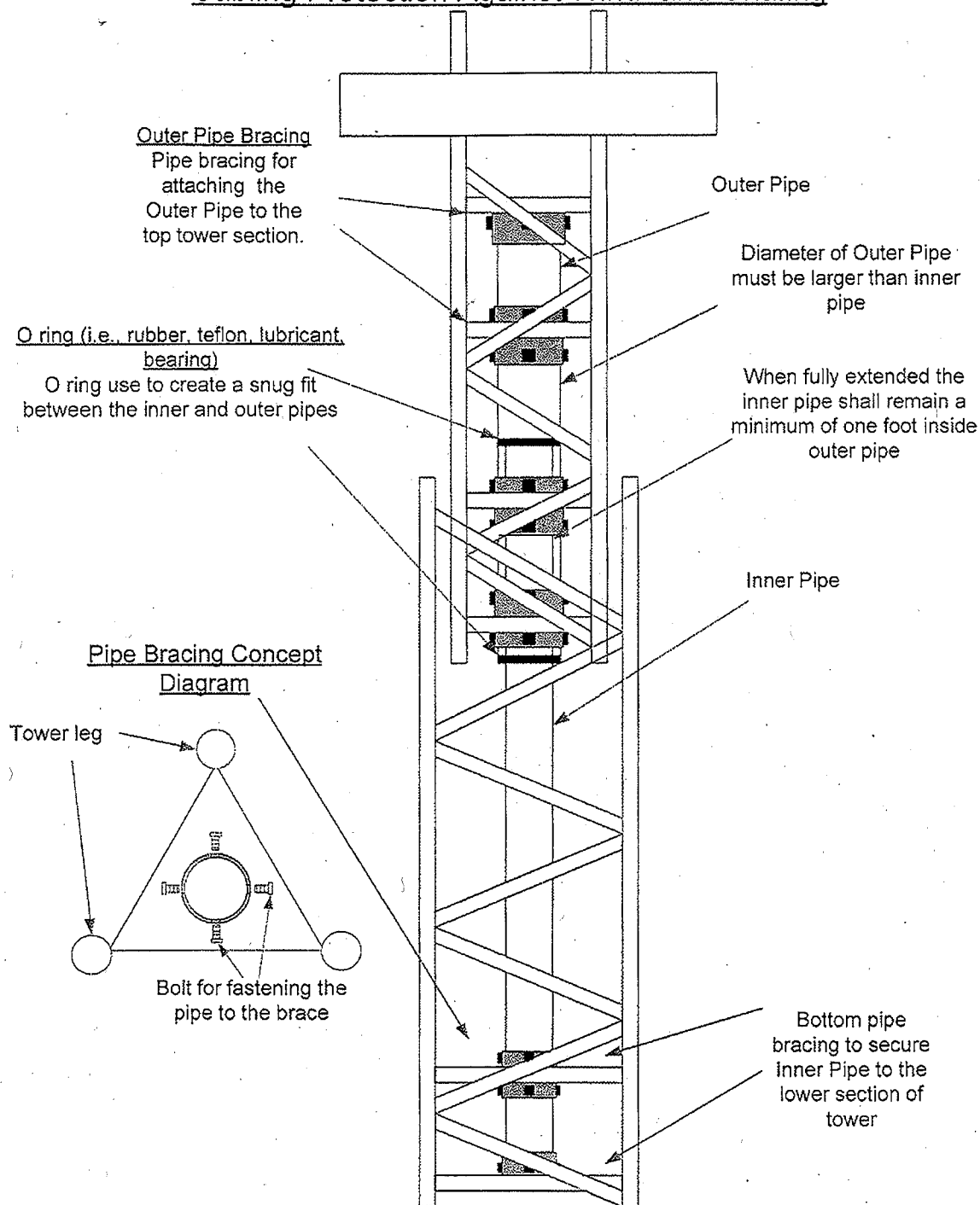
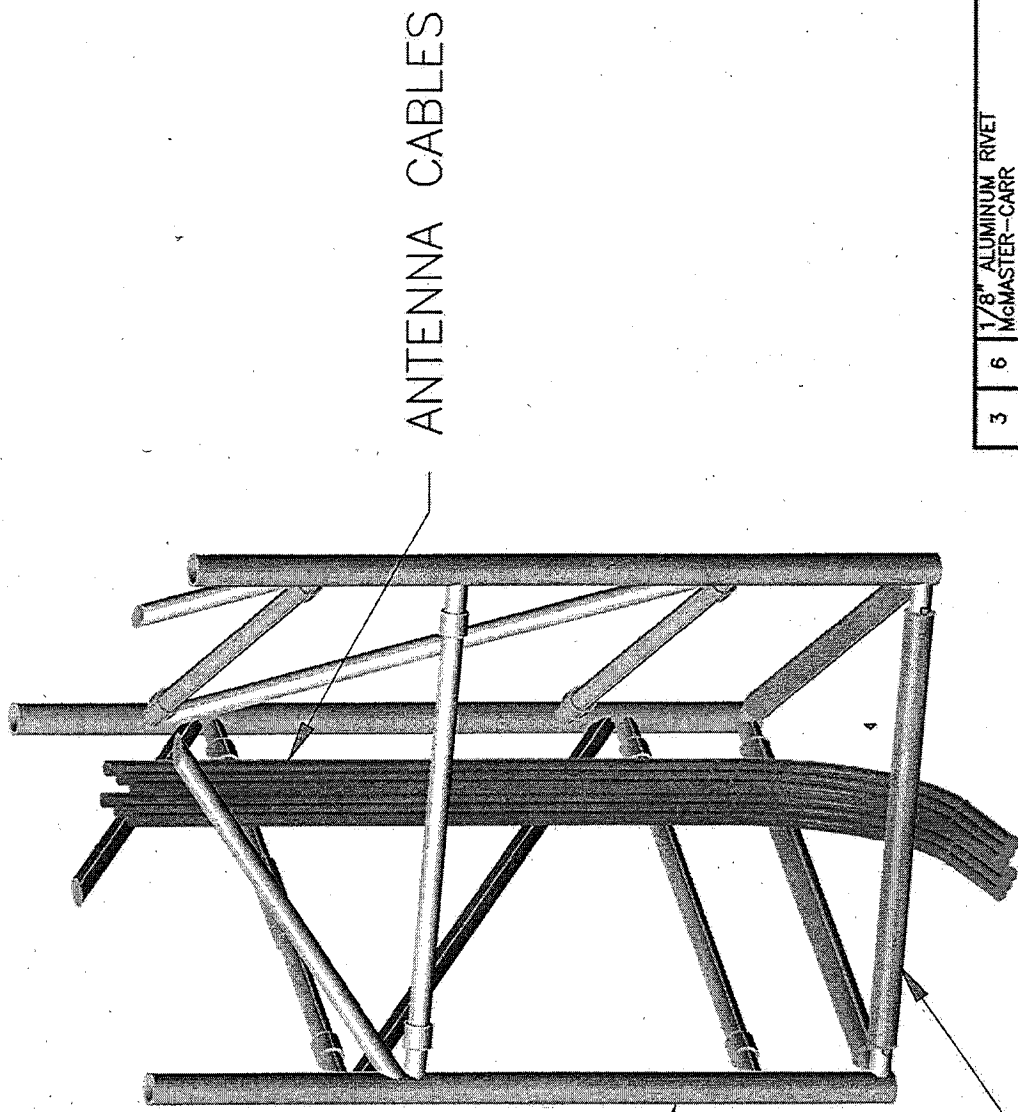


Figure 3

M.Ahmed

(New)



TOWER LEGS

FULL WIDTH PVC  
ROLLERS ON 3  
BOTTOM RUNGS,  
IN LINE.

ANTENNA CABLES

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3	6	1/8" ALUMINUM RIVET
2	6	McMASTER-CARR
1	3	RIVET WASHER
		MICRO PLASTICS
		1" x 20 1/2" LONG
		SCHEDULE 40 PVC PIPE
ITEM	QTY	MATERIAL

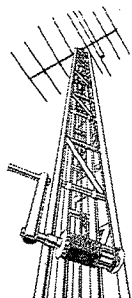
ALUMA TOWER CO. INC.

VERO BEACH, FL 32960

CABLE ROLLERS FOR BOTTOM  
OF "E" SECTION TOWER

DRWN BY:	SCALE:	DRWG. NO.
H.C.	FULL	
DGN BY:	DATE:	
C.D.	2-19-09	E-1419
CHK BY:	APP'D	

REV.	DATE	DESCRIPTION	BY
B			
A			



# ALUMA

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**NOTE: FINAL REVISION IS IN RED, 3-5-09**

**NOTE: THIS REVISION IS NOTED IN ALL CAPS, 1-16-09**

The State of California has awarded Aluma Tower Co. Inc. purchase order No. 62153 consisting of 2 trailer tower units with 75' telescoping towers, Aluma model TM61-WA80-EB4S812H/T-75XHD. Regarding this particular purchase order, clarification is required in regards to the bid specification.

*The requests for clarification below will coincide with the particular section of the bid specification in which the clarification is needed.*

## 1. Scope

how much weight will be added to the unit once it is received?

**2,000# max. Both dishes to be transported on separate vehicles.**

## 3. Requirements

### 3.1 Shelter

3.1.7 Location needed for Programmable thermostat for AC/Heat units

**Curbside wall, side by side, eye level.**

3.1.8 Clarify "fully secured". Standard installation includes vibration isolation between rack and floor suitable for up to 1,000 lbs. of radio equipment. No additional mounting is required per radio rack mfr. Specifications. We can also provide vibration isolators between the rack and the ceiling, if more fastening is required. Please specify.

**Aluma standard isolators mounted on bottom of racks only.**

3.1.9 Clarify location & configuration of Roxtecs cable ports. Concern that "centered" may interfere with tower. Also need to know height of Roxtec's on front & rear walls.

**Rear- roadside (standard location), front- 3 curbside of center and 2 roadside of center. Aluma to provide drawing for final approval.**

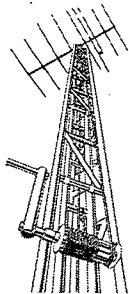
**DRAWING TM51-626-3 & TM51-626-4 HAVE BEEN APPROVED  
(NOTE: ALL 5 FRONT CABLE PORTS ARE ON CURBSIDE OF  
CENTER)**

3.1.10 Location of phone inlets needed. Also need clarification to ensure the ones we supply will suit your needs (same as previous?). They are not available in white and if painted may peel easily. Can supply white plastic ones but are a little different with the jack on both the inside and outside rather than the modular plug on outside. Please specify/clarify.

**Front or rear wall (best place) side by side. Aluma to provide drawing for final approval.**

***Note: new style jack with RJ plug on interior and exterior.***





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www.ALUMATOWER.com

**DRAWING TM51-625-3 SHOWS INTERIOR, TM51-626-3 SHOWS EXTERIOR AND HAVE BOTH BEEN APPROVED.**

- 3.1.13 References fig. 1 but does not relate to figure 1 which is on page 8. Need location of fan, thermostat for fan, and speed control. Need to clarify "operational temperature presets".

**Rear wall, curbside, behind roof ladder. Controls on interior, same vicinity. Aluma to provide drawing for final approval.**

**DRAWING TM51-625-3 SHOWS INTERIOR, TM51-626-3 SHOWS EXTERIOR AND HAVE BOTH BEEN APPROVED.**

- 3.1.17 Clarify "outside face" and "at a point above diamond plate". Which outside faces (only where decks are?)? What height on exterior shelter walls? Also, which 3 interior walls?

**Wherever something could be fastened, inside & outside. Aluma to provide drawing for final approval.**

**DRAWING TM51-625-1 THRU -4 SHOWS INTERIOR, TM51-626-1 THRU -4 SHOWS EXTERIOR AND HAVE ALL BEEN APPROVED.**

## 3.2 Main Antenna Tower

- 3.2.2 Previously discussed Aluma Quad Antenna Standoff for mounting antennas to replace Annex A mounting arrangement.

**Aluma's quad antenna standoff needs modifications to accept CHP antennas. Aluma to provide drawing for final approval.**

**IS DRAWING QS-1792 ACCEPTABLE FOR CHP ANTENNAS? IF NOT, WE NEED TO DISCUSS WHAT NEEDS TO BE CHANGED.**

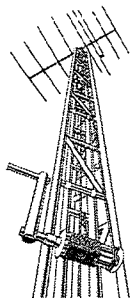
**ALUMA DRAWING QS-1835-2 REPLACES ANNEX B AND HAS BEEN APPROVED**

- 3.2.3 Previously discussed using Aluma Torque brackets atop each section to mount cable adapter plates to replace Annex B cable adapter plates.

**Aluma to design something similar to existing coax cable standoff product. Aluma to provide drawing for final approval.**

***Note: Cable is Andrews #LEF 4-50A, up to 6 cables, cables to stay on tower during transport.***

**ALUMA WILL PROVIDE DRAWING FOR FINAL APPROVAL BY JANUARY 23, 2009.**



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## ALUMA DRAWING QS-1835-2 REPLACES ANNEX B AND HAS BEEN APPROVED

- 3.2.4 Need to discuss alternatives to Annex C proposal due to weight issues of pipe and hindering telescoping of tower. Need clarification of intending cable routing and storage. Aluma has some ideas to propose.

**ALUMA PROPOSES A PROTECTIVE BRAIDED SHEATHING DESIGNED FOR SUCH APPLICATIONS. PLEASE REVIEW AND PROVIDE APPROVAL.**

## ALUMA DRAWING AT-1885 REPLACES ANNEX C AND HAS BEEN APPROVED

- 3.2.5 Need to know antenna spec.s for main tower i.e. weight, surface area sq. ft., etc.  
**Aluma provided max. criteria of 200 lbs. dead weight, 23 sq. ft. surface area. C.H.P. agreed to stay within these limits.**

### 3.3 Additional Antenna (Separate)

- 3.3.1 Auxiliary Antenna Tower mounted to front deck, fixed to front shelter wall. How will dish be installed from separate transport vehicle? If specific dish to be used has been determined, it would be extremely useful information to aid in the design of the tower. What type of termination at the top of tower (flat plate, mast, etc.)?

**Pulley system to be used to put dish on, per C.H.P. The specific dish is the one in the spec. or the current version of that dish. The mast for the dish to mount must be 4" pipe. Aluma to provide drawing for final approval.**

*Note: Further discussion is necessary to finalize design and clarify what is Aluma's responsibility and what is C.H.P.'s responsibility in regards to the method in which the dish will be transferred to the tower.*

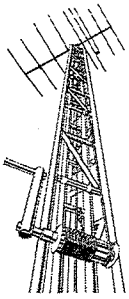
**ALUMA HAS RECEIVED FINAL VERBAL APPROVAL. PLEASE CONFIRM PER DRAWING AT-1874-1 REV. B.**

**ALUMA HAS CONFIRMED FINAL APPROVAL**

### 3.4 Trailer

- 3.4.1 Dimensions: 28' length is correct but note, the overall length of the finished trailer with tower is approx. 35' (see Aluma drawing QS-1813)  
**Acceptable per C.H.P.**

- 3.4.3 Specifying 6,000 lb. torsion axles, adjustable ride height or better. We are supplying 7,000 lb. oil bath torsion axles. Aluma considers these to fall under the "or better" scenario. Please confirm. *Note, adjustable ride height axles are not recommended due to clearance issues.*



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Acceptable per C.H.P. Aluma to send spec.'s on axles and to note ground and height clearances on drawing.

**AXLES ARE GALVANIZED 7,000 LB. TORSION SPRING OIL BATH  
AXLES MANUFACTURED BY QUALITY AXLES. SEE AT-1872  
REV. A FOR GROUND CLEARANCE.**

- 3.4.5 Wheels rims painted white, or chrome. Is galvanized acceptable? It is better than painted white since the painted ones will rust easier. Alternatively, aluminum wheels are available, but not chrome.

**Galvanized is acceptable**

- 3.4.7 GVWR 11,990. We are building the trailer to have GVWR of 13,990 due to accessories and features. Please confirm. (weight added after we ship will be critical if GVWR remains at 11,990)

**13,990 is acceptable**

- 3.4.9 Electric tongue jack will be 3,500 lb. Wheel on tongue jack not advisable. Wheel adapter will make "weak link" on tongue jack and will not provide ability to move trailer around due to weight.

**No wheel is acceptable**

- 3.4.10 Storage box "hasp & padlock key". Mfr. Supplies with key lock. Please confirm acceptable.

**Aluma will add a hasp only**

- 3.4.12 FYI: Yes, trailer meets these regulations but **MUST ALWAYS BE TOWED LEVEL**. This is denoted with decals on the trailer and literature in the owner's manuals.

**Noted**

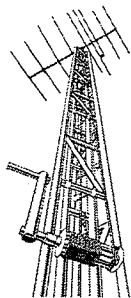
- 3.4.15 Referencing Halo & tower grounding, states "if necessary". Is this necessary/required?

**Yes. Halo and tower grounded will be included**

- 3.4.16 Clarify "Two red lighted devices required at night".

**Aluma will send photo of current light used and C.H.P. (Rick) will confirm it is acceptable**

**LIGHT THAT WAS USED ON PREVIOUS CHP TRAILERS MEETS REQUIREMENTS AND WILL BE USED. ACCEPTABLE PER CHP.**



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- 3.4.17 How critical is the tongue weight of 1,100-1,200 lbs? We have to preset the axle and adjust as needed. Please advise.

**Must be between 10-13% of GVWR. Aluma will pre-set the initial axle location based on load information provided. Axle will be adjustable front to rear to adjust tongue weight after shipping. This may be necessary depending on C.H.P. additions after receiving and adding accessories.**

## 3.5 Electrical

- 3.5.6 Need requirements for camera wiring and related

**C.H.P. will wire. Camera to be mounted on removable standoff near top of main tower**

- 3.5.8 Clarify "accessory jacks" and locations

**standard GFI receptacles, one near corner on exterior walls**

- 3.5.9 Clarify type of LP quick connect required. Propane contractor asked if it was for connecting/disconnecting to generator or to other tank for filling, etc.

**Tee to connect other tank with a valve to switch between 2 tanks. 1/4" fitting. Aluma to confirm connector prior to finalizing installation of LP tanks & lines.**

**AMERIGAS TO PROVIDE DETAILS OF PROPER INSTALLATION PER NFPA 58 AND ANSI NFPA 1192. WILL FORWARD DETAILS TO CHP FOR APPROVAL BY JANUARY 23, 2009.**

**ALUMA HAS RECEIVED FINAL APPROVAL PER SKETCH FROM AMERIGAS**

- 3.5.11 "flashing emergency kit". Is this a our flashing emergency light at the rear of the trailer when in tow?

**Triangle light kit for roadside emergency or break down**

**ALUMA TO PROVIDE TRIANGLE EMERGENCY LIGHT KIT IN STORAGE BOX OF EACH TRAILER.**

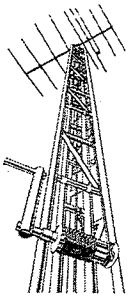
- 3.5.15 Tripod Tele-Lite or fixed telescoping type?

**Tripod type is acceptable**

- 3.5.18 12VDC Compressor, can it 115VAC instead since you have AC power available?

**115VAC is acceptable. Note: compressor can be larger than specified but not smaller (min. 4-6 gal. 1.5-2 HP)**

- 3.5.22 Clarify, Is this per our standard layout or in addition? 115 VAC? Location(s)?



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Standard layout per Aluma drawing ES-0163 is acceptable. In addition, 6 ceiling twist locks and 4 exterior GFI's.

- 3.5.23 Exterior receptacles cannot go on chassis, only on the shelter exterior. Please specify locations.

**One GFI near each exterior corner (previously clarified 3.5.8)**

- 3.5.24 What type of 12 VDC accessory plug outlets (Anderson connectors, cigarette lighter type?)?

**Cigarette lighter type acceptable. Weatherproof, 1 front & rear, near deck**

- 3.5.25 Courtesy lights says battery operated 12 volt. Which one? Replaceable self contained batteries or tied into the 12VDC electrical system? Clarify type, quantity and locations.

**Small courtesy lights on 12V battery system, one circuit, switch on battery box. Lights to be located near each outrigger, and on each side wall of interior. Also include fuse block for all 12V accessories.**

- 3.5.26 Clarify "two on both sides". Total of 2 or 4? Need to be aware of clearance issues with other lighting

**Two on each exterior side wall, total of 4, recessed in wall.**

## REFERENCE DRAWINGS TM51-626-1 AND TM51-626-2

- 3.5.27 Mounting issues previously discussed. Have other comparable lights in mind and awaiting info. From Will-Burt as to installation specifics

**Aluma to provide choices that will fit and 115VAC/240VAC voltages.**

***Note: C.H.P. is not set on specific wattage***

**WIL-BURT MODEL #NS1-8-3000-4 OPT HAS BEEN APPROVED BY CHP. LIGHT IS 240VAC, HAS 4 BULBS EACH 500WATT FOR 2,00 WATT TOTAL AND IS THE 7.5 FT. MODEL.**

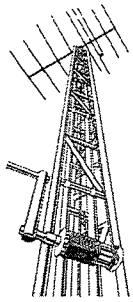
**STANDARD 196 WAS COMPLETED ON JANUARY 6, 2009 BY CHP. ALUMA REQUESTS A COPY OF THIS DOCUMENT.**

## 4.0 Exterior Specifications

- 4.1 Clarify. 4 outriggers with jacks and an additional 4 jacks on the frame?

**4 outriggers with jacks and 4 additional fixed jacks on frame.**

***Note: Aluma to look into extending outriggers (Lowell to do calculations to determine if worthwhile)***



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[www.ALUMATOWER.com](http://www.ALUMATOWER.com)

**CALCULATIONS SHOW NO WORHTHILE GAIN BY  
EXTENDING OUTRIGGERS. STANDARD OUTRIGGERS WILL BE  
USED.**

4.6 Same as previous mentioned (Annex C)? If not, clarify.

**Same as previously discussed**

4.7 Clarify. How many D-rings required? Previously mentioned, may be resolved?

**Approximately every 2 feet**

**APPROXIMATELY 20 PER TRAILER**